

# CANopen Source Code

Integrate CANopen communication in customized products

Save time and cost in creating standard compliant CANopen devices with the CANopen Protocol Stack Source Code by SYS TEC electronic. You don't need to be an expert in order to design standard compliant CANopen devices when using the CANopen protocol stack. All communication services are ready to use and have proven to be standard-compliant in many industrial applications.



**CANopen**®

Comprehensive CANopen functions

Includes toolchain for testing and network configuration

1 year free support and update service

Buy-out licenses - no product or runtime licenses

Visit [www.systec-electronic.com/CANopenSupportedPlatforms](http://www.systec-electronic.com/CANopenSupportedPlatforms) for a complete list of supported target platforms.

## Modular and Scalable Source Code Structure

A straight-forward ANSI-C implementation makes our source code most flexible and portable to any target platforms. Numerous source code configuration options allow for a best optimization of the source code in terms of speed and memory consumption. The comprehensive API of the CANopen Protocol Stack enables a simple integration to user applications.

## Industry-specific Add-on Packages

Different industries have their specific needs. To meet those demands we offer optional add-on software packages to our CANopen. Please refer to the backside of this flyer for a list of available add-on packages.

## Real-Time Capable

The Zero-Copy strategy and the seamless implemented, strictly event-based software structure make our CANopen Protocol Stack best suitable for use with realtime applications as well as realtime operating systems.

## Supported Platforms

### 8-bit:

Infineon, Philips, Generic 80x51, Atmel AVR, Silabs

### 16-bit:

Infineon, Renesas, Fujitsu, Microchip Technology, Texas Instruments

### 32-bit:

Philips, Freescale, Intel 80x86 based, Infineon TriCore, XMC4xxx, Generic ARM/ ARM-Cortex, Texas Instruments, Altera (NIOS), Xilinx (ZYNQ-7000)

### Supported CAN controllers (external):

SJA1000, TouCAN, TwinCAN, 82527, MCP2515, TDRV011

### Supported Operating Systems:

Windows 10, 8, 7, 2000/XP/XPe/CE, Linux, DOS

### Real-Time OS:

eCos, PxBOS, CMX\*, VxWORKS\*, QNX\*

\*realized in customer-specific projects, not part of the standard delivery

### Your target platform is not listed here?

Contact us, for professional adaptation support on your favorite platform.

## About SYS TEC electronic

SYS TEC electronic GmbH is a system house for distributed automation technology. We provide a comprehensive service from consulting to OEM integration.

Founded in 1990 in Germany SYS TEC electronic has more than 25 years experience in customized development of microcontroller systems and industrial communication.

Feature	Product	SO-877 CANopen Source Code	SO-877-VP CANopen Source Code Value Pack	SO-1063-VP CANopen Manager Source Code	Add-on Package
CAN driver source code		•	•	•	
Multi-instance support		•	•	•	
Event driven API for OS		•	•	•	
Generic OS API integration		•	•	•	
CANopen DeviceExplorer			•	•	
CAN-bus monitor with CANopen protocol plug-in			•	•	
USB/CAN interface			•	•	
1 year free technical support and update service		•	•	•	
Receive PDOs/Transmit PDOs		512/512	512/512	512/512	
Static PDO mapping support		•	•	•	
Dynamic PDO mapping support		•	•	•	
Bitwise PDO mapping support		•	•	•	
SDO servers/clients		127/127	127/127	127/127	
SDO segmented transfer		•	•	•	
SDO block transfer		•	•	•	
Emergency producer/consumer		•/•	•/•	•/•	
SYNC producer/consumer		•/•	•/•	•/•	
Heartbeat producer		•	•	•	
Heartbeat consumers		127	127	127	
Life guarding/Node guarding		•/•	•/•	•/•	
Boot-up protocol		•	•	•	
Node control protocol/ Error control protocol		•/•	•/•	•/•	
NMT slave state machine		•	•	•	
Time stamp object		•	•	•	
High-precision time stamp		•	•	•	
Layer Setting Services (LSS) slave/master		•/•	•/•	•/•	
Store/restore parameter support		•	•	•	
CiA 303-3 indicator specification support		•	•	•	
SRD client (dynamic SDO client)		•	•	•	
SDO manager				•	
CANopen manager boot-up procedure				•	
CiA 302 Configuration Manager				•	
Process image, dynamic object dictionary support (SO-1074)					•
Multiplexed PDO (MPDO) (SO-1066)					•
CiA 304 relevant data objects (SRDO)					•
CiA 402 device profile for motion control and drives					•
CiA 302-2 Flying Master (SO-1114)					•
CiA-302-7 SDO-Gateway					•
CiA-302-3 CANopen Bootloader					•

## CANopen Add-on Packages

### CiA 402 Add-on (SO-1081)

This add-on module implements the CANopen device profile for drives and motion control according to CiA 402, as it is used for digital controlled motion products like servo controllers, frequency converters and servo motors.

### MPDO Add-on (SO-1066)

This add-on module provides multiplexed PDO services according to CiA 301. A multiplexed PDO is a special type of PDO that is used wherever more process data are to be transmitted, as "normal" PDOs are available.

### SRDO Add-on (SO-1059)

This add-on module provides all services and functionality compliant to CiA 304 - CANopen Framework for safety relevant communication. It allows for design of safety relevant CANopen devices based on SRDOs (Safety Relevant Data Objects).

### Dynamic OD Add-on (SO-1074)

The Dynamic OD Add-on implements a Dynamic Object Dictionary as specified in CiA 302 and provides functionality to replace, extend or modify parts of an existing object dictionary at runtime (e.g. PDOs, process data).

### SDO Gateway Add-on (SO-1078)

This add-on module implements a SDO gateway function, which makes possible the forwarding of SDO messages between two or more CANopen networks.

### Flying Master Add-on (SO-1114)

In multi-master-systems this add-on module determines the active master dynamically at runtime. It is implemented according to CiA 302.

### CANopen Bootloader (SO-1089)

The CANopen Bootloader is a software package used to transfer programs in binary format to the target hardware and to run them there using CANopen. The functionality of the bootloader package is designed according to the specifications of CANopen Standard CiA 302.



## Ordering Information

SO-877 CANopen Source Code  
 SO-877-VP CANopen Source Code Value Pack  
 SO-1063 CANopen Manager Source Code  
 SO-1063-VP CANopen Manager Source Code Value Pack

For quotations please contact us:

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